CyberPower®
Reliability. Quality. Value.

User's Manual

Remote Management Card

RMCARD202/RMCARD203

RMCARD302/RMCARD303

Intelligent Remote Management Card allows a UPS system/environment sensor to be managed, monitored, and configured

Version 1.6

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INTRODUCTION

Overview

The CyberPower Remote Management Card allows for remote monitoring and controlling of a UPS attached to a network. After installing the hardware and configuring an IP address, the user can access, monitor, and control the UPS from anywhere in the world! Simply use a web browser such as Internet Explorer or Firefox to access your UPS. Servers and workstations can be protected by the UPS utilizing the PowerPanel Business Edition Client version to gracefully shutdown when signaled by the Remote Management Card.

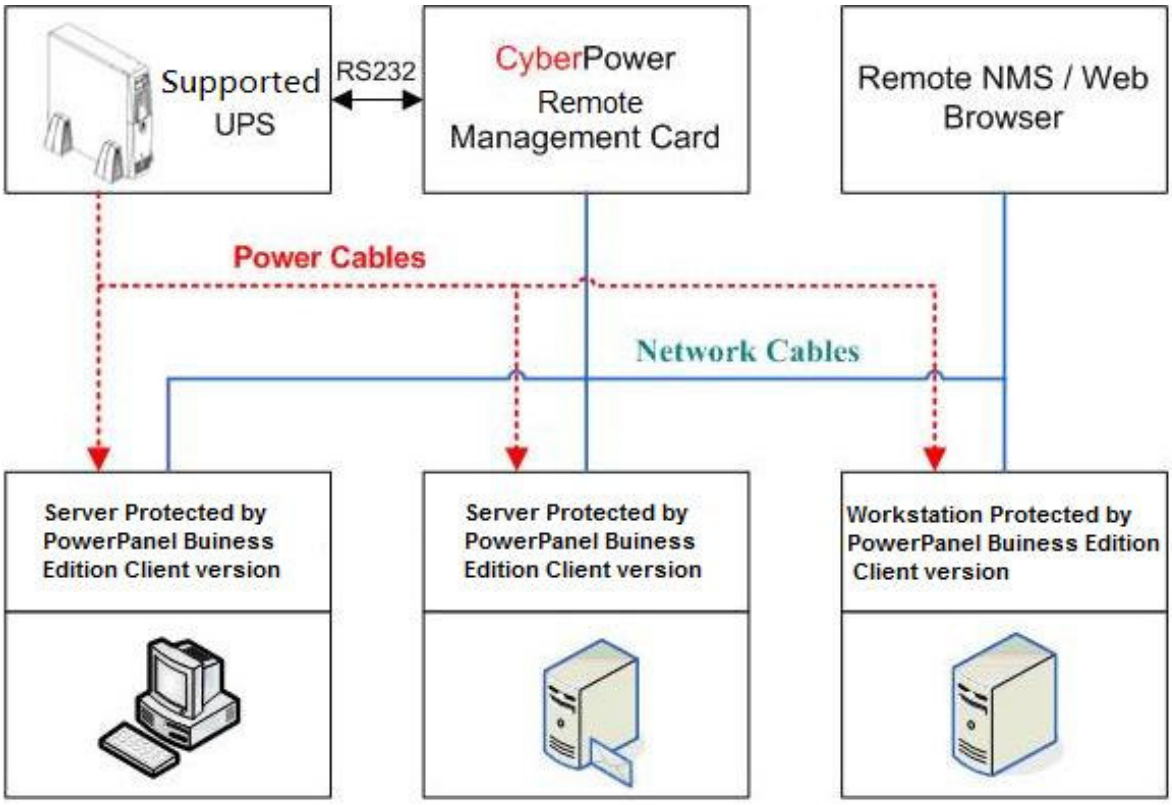
Features

- Real time UPS monitoring
- Remote management and configuration of UPS via Web Browser or NMS
- Auto-shutdown to protect servers/workstations from data lost due to power failure
- Schedule shutdown/start-up/reboot of the UPS via remote control
- Event logging to trace UPS operational history
- Data logging for analyzing power conditions
- Event notification via email and SNMP traps
- Support Environment Sensor management(RMCARD203/303)
- Support TCP/IP, UDP, SNMP,HTTP, NTP, DNS, SMTP protocol
- Support SNMPv3, HTTPS protocol (HW V2.0 above)
- SNMP MIB provided
- Quick installation and user friendly interface
- User upgradeable firmware via FTP
- MD5 Security management provided

System Requirements

- A computer with a Windows or Linux Operating System (for optional PowerPanel Business Edition Client)
- An Ethernet connection to an existing network
- NMS (Network Management Station) compliant with SNMP (for optional NMS management)

Application


Supported UPS
RS232
CyberPower Remote Management Card
Remote NMS / Web Browser
Power Cables
Network Cables
Server Protected by PowerPanel Buiness Edition Client version
Server Protected by PowerPanel Buiness Edition Client version
Workstation Protected by PowerPanel Buiness Edition Client version

Unpacking

Inspect the Remote Management Card upon receipt. The package should contain the following:

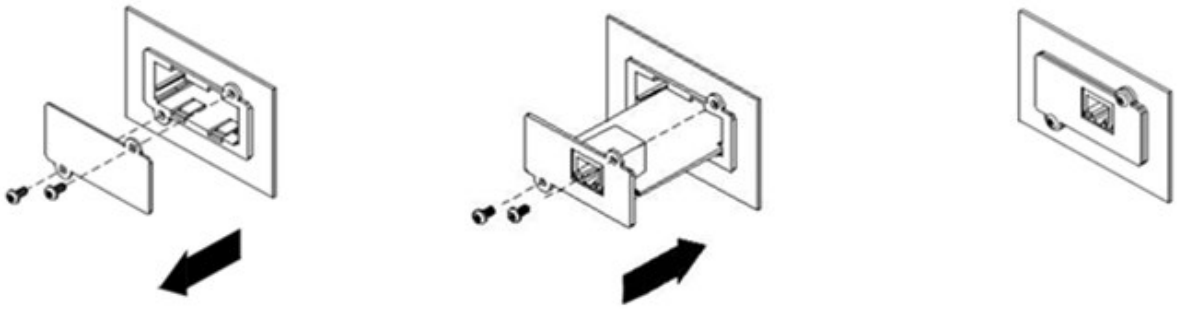
- CyberPower Remote Management Card
- PowerPanel Business Edition CD with Software
- Quick Installation Guide

INSTALLATION GUIDE

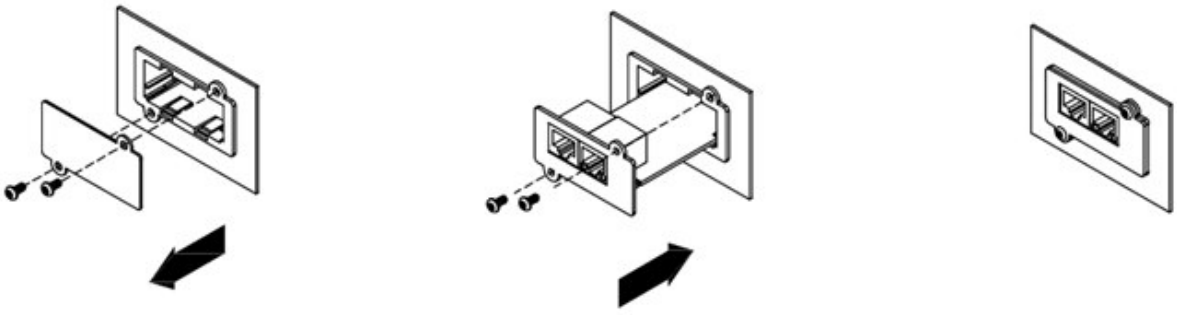
Step 1. Hardware Installation

Internal smart slot Remote Management Card

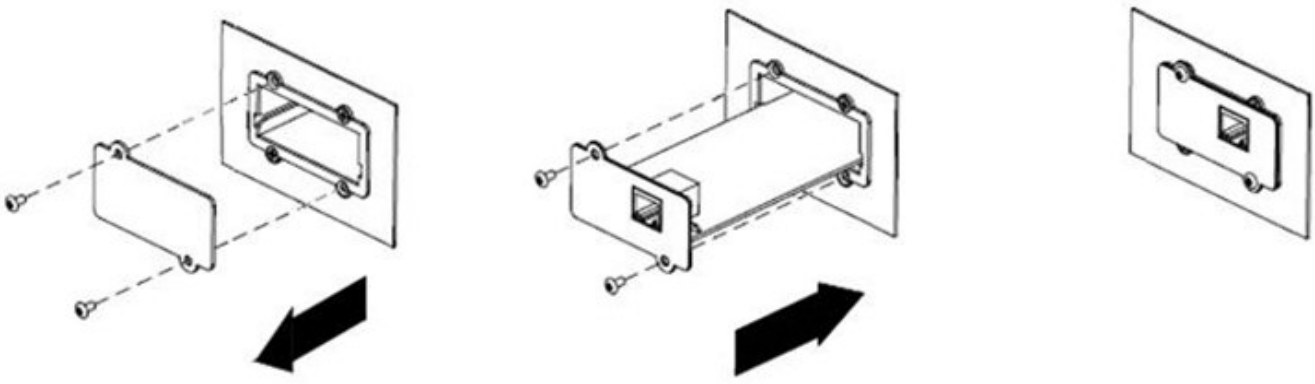
1. Turn off the UPS before removing the expansion port cover on the UPS.
2. Remove the two retaining screws from the expansion port cover and remove the cover.
3. Insert the CyberPower Remote Management Card into the expansion port.
4. Re-install and tighten the retaining screws.
5. Connect the Ethernet cable to the LAN port on the CyberPower Remote Management Card.
6. To connect with the environment sensor, use RJ45 Ethernet cable. Plug one end into the Universal connector and the other end into the sensor (RMCARD203/303).
7. Turn on the UPS.



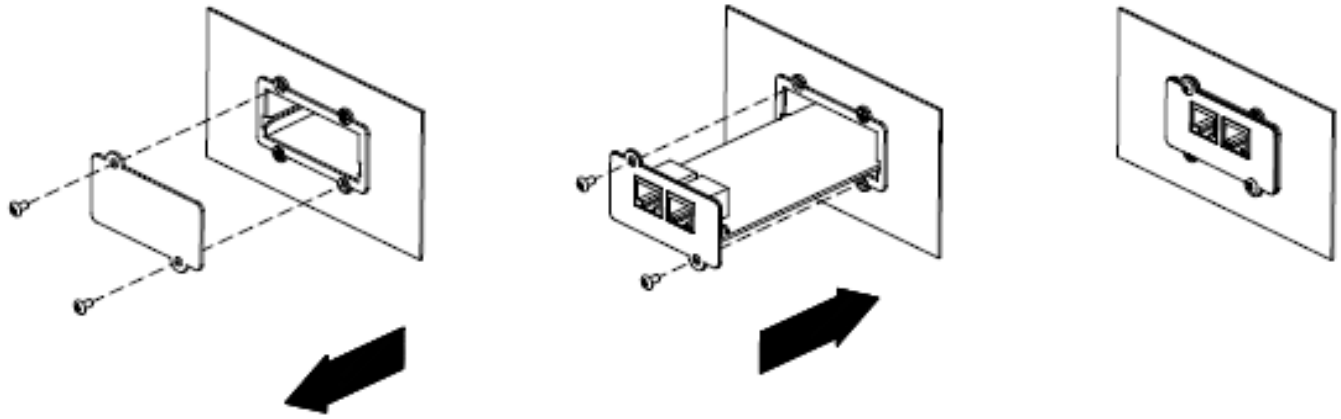
RMCARD202



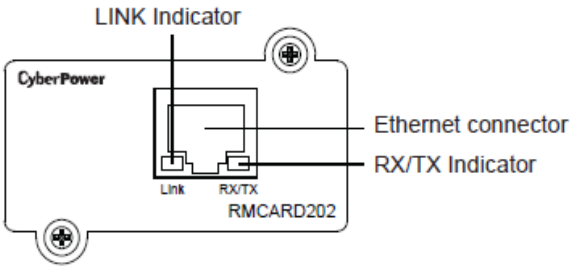
RMCARD203

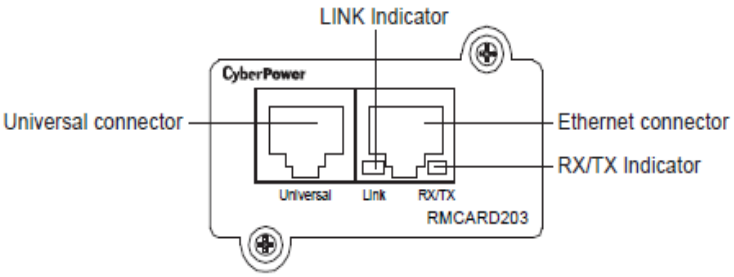


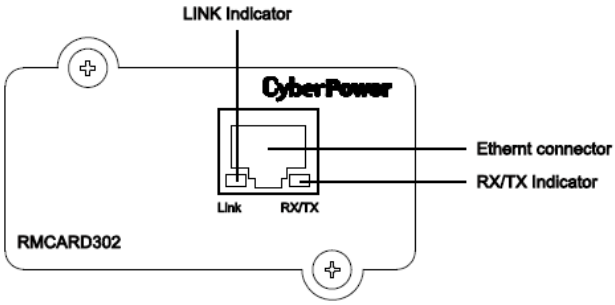
RMCARD302

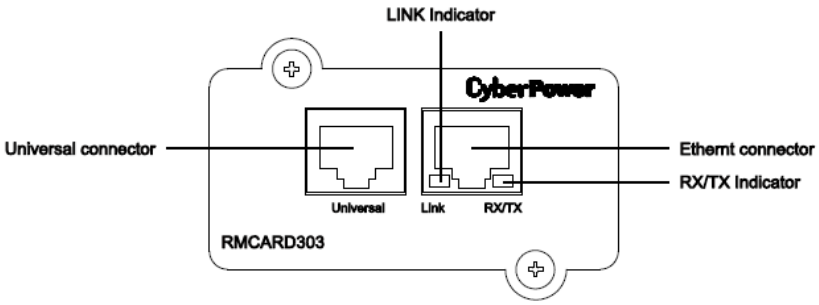


RMCARD303


LINK Indicator
CyberPower
Ethernet connector
RX/TX Indicator
Link
RX/TX
RMCARD202


LINK Indicator
CyberPower
Universal connector
Ethernet connector
RX/TX Indicator
Universal
Link
RX/TX
RMCARD203


LINK Indicator
CyberPower
Ethernt connector
RX/TX Indicator
Link
RX/TX
RMCARD302


LINK Indicator
CyberPower
Universal connector
Ethernt connector
RX/TX Indicator
Universal
Link
RX/TX
RMCARD303

Definitions for LED Indicators

Link LED color	Condition
Off	The Remote Management Card is not connected to the Network/or the Remote Management Card Power is off.
On (Yellow)	The Remote Management Card is connected to the Network.
TX/RX LED color	
Off	The Remote Management Card power is off.
On (Green)	The Remote Management Card power is on.
Flash	- Receiving/transmitting data packet. - Reset finished.

Step 2. Configure the IP address for the CyberPower Remote Management Card

Method 1: Using the CyberPower Power Device Network Utility Tool

1. Install the CyberPower Power Device Network Utility Tool from the included CD. It is located in the \tools\network folder of the CD. Double click the “Power Device Network Utility” installation file, “Setup.msi” to begin the installation.
2. After installation completes, run the “Power Device Network Utility” program. Under “All Programs, select ”CyberPower Power Device Network Utility”.
3. The main dialog of the “Power Device Network Utility Tool” program is shown in Figure 1. The configuration tool will display all CyberPower Remote Management Cards of present on the same network. The "Refresh" button is used to search the entire local network for Remote Management Cards.

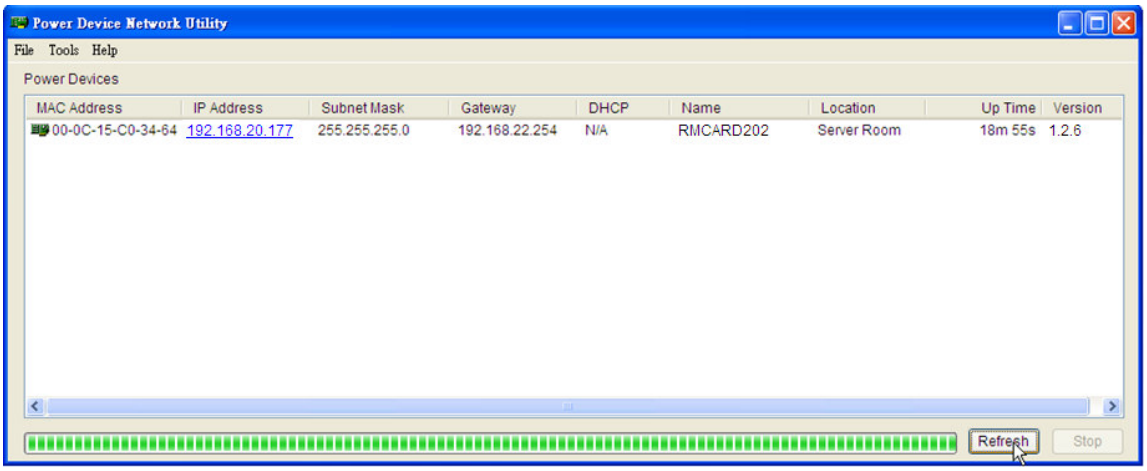

Power Device Network Utility
File Tools Help
Power Devices
MAC Address IP Address Subnet Mask Gateway DHCP Name Location Up Time Version
00-0C-15-C0-34-64 192.168.20.177 255.255.255.0 192.168.22.254 N/A RMCARD202 Server Room 18m 55s 1.2.6
Refresh
Stop

Figure 1. The main window of the “Power Device Network Utility” program.

4. Select the Remote Management Card you are setting up. Click on the Tools menu and select “Device Setup” or double click the Remote Management Card you want to configure.
5. You can modify the IP Address, Subnet Mask, and Gateway address for the Device MAC Address listed in the Device Network Settings window, as shown in Figure 2. The default IP Address is 192.168.20.177 and the default Subnet Mask is 255.255.255.0.

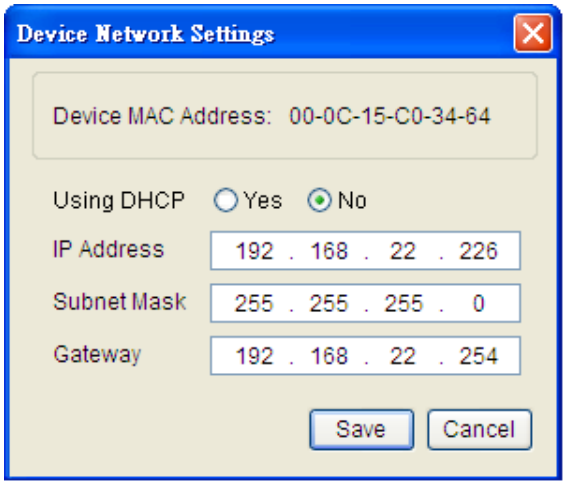

Device Network Settings
Device MAC Address: 00-0C-15-C0-34-64
Using DHCP Yes No
IP Address 192 . 168 . 22 . 226
Subnet Mask 255 . 255 . 255 . 0
Gateway 192 . 168 . 22 . 254
Save
Cancel

Figure 2. The setting window.

6. To modify the IP Address, Subnet Mask or Gateway address, enter the new addresses into the corresponding fields.
7. You will need to enter a User Name and Password for the Remote Management Card (Figure 3) in the authentication window, as shown in figure 3.

   *Default user name: **cyber**; Default password: **cyber**

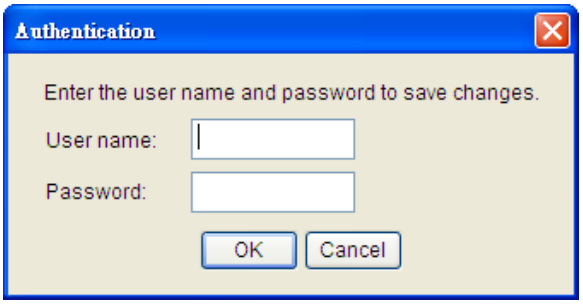


Figure 3. The authentication window.

8. If IP address is successfully set, you will see a message that the IP set up is OK, as shown in Figure 4.

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Figure 4. Setup IP Address successfully message.

Method 2: Using a command prompt

1. Obtain the MAC address from the label on the Remote Management Card rear panel. Each Management card has a unique MAC address.
2. Use the ARP command to set the IP address.
   Example:
   To assign the IP Address 192.168.20.240 for the Remote Management Card, which has a MAC address of 00-0C-15-00-00-01, you will type in the following command prompt from a PC connected to the same network as the Remote Management Card.
   A. Type in “arp -s 192.168.20.240 00-0C-15-00-00-01” then press Enter.
3. Use the Ping command to assign a size of 123 bytes to the IP.
   A. Type in “ping 192.168.20.240 -l 123” then press Enter.
   B. If the replies are received, your computer can communicate with the IP address.

To select an IP address for the Remote Management Card, please refer to Appendix 1.

WEB INTERFACE

Login Account

There are two types of user account:

- Administrator (default username: **cyber**; default password: **cyber**)
- Viewer (default username: **device**; default password: **cyber**)

The Administrator can access and control all functions, including enable/disable of the Viewer account. The Viewer's access possesses read permissions for all functions but cannot control or change any settings.

Note: 1. The Administrator account is also used for the FTP log in and authentication check in the Power Device Network Utility.
2. The Login process uses MD5 algorithm to protect the username and password.

Web Content

[Summary] Provide an overview of the system operation and the items that are auto refreshed; However, different model of RMCARD may have different items displayed.

Item	Definition
Current Condition	Display the current operating condition of UPS and environment sensor.
UPS Status	
Battery Capacity	The percentage of the current UPS battery capacity in a graph.
Load	The load of UPS as a percentage of available Watts in a graph.
Remaining Runtime	How long the UPS can support its load by battery power.
System Data	
Name	The name of the equipment.
Location	The Location of the equipment.
Contact	The person to contact about this equipment.
Uptime	How long the system has been working continuously.
Envir	
Temperature	The current temperature of the environment in a graph.

Humidity	The current humidity of the environment in a graph.
Envir Data	
Name	The name of the environment sensor.
Location	The location of the environment sensor.
Recent Device Events	List the latest 5 events that occurred recently.

[UPS] Following items can be displayed/configured through the UPS page; however, different UPS may have different items displayed/configured.

[UPS->Status] Display the basic information about the current UPS status and the items are auto refreshed.

Item	Definition
Input	
Status	Display the present status of the utility power supplied to the UPS.
Voltage	The current input voltage of the utility power.
Frequency	The current frequency of the utility power supplied to the UPS.
Output	
Status	Display the present status of the output power the UPS is supplying to connected equipment.
Voltage	The output voltage the UPS is supplying to the connected equipment.
Frequency	The output frequency the UPS is supplying to the connected equipment.
Load	The percentage of the total UPS capacity that is being supplied to the connected equipment. This is displayed as Watts in some UPS models.
Non-Critical Bank	Display the present status of the NCL outlet.
Battery	
Status	Display the present status of the battery packs.
Remaining Capacity	The percentage of the current UPS battery capacity.

Remaining Runtime	How long the UPS can support its load under battery mode.
System	
Temperature	The temperature inside the UPS.

[UPS->Information] Provide the technical specifications of the connecting UPS.

Information	Description
Model Name	The model name of the UPS.
Voltage Rating	The output voltage rating (Volts) of the UPS.
Working Frequency	The output frequency rating (Hz) of the UPS.
Power Rating	The Volt-Amp rating of the UPS.
Current Rating	The output current rating (Amps) of the UPS.
Load Power	The power rating (Watts) of the UPS.
Battery Voltage Rating	The DC voltage rating of the battery set.
Firmware Version	The version number of the UPS firmware.
USB Version	The version number of the UPS USB firmware
LCD Version	The version number of the UPS LCD firmware
Battery Replacement Date	The date that the batteries were last replaced This must be set manually and should be set after the batteries have been replaced or when the unit is first installed. If this date has not been set, it is recommended that this date should be set immediately.
Non-Critical Bank	The amount of the Non-Critical Load.
External Batteries	The amount of the external battery packs connected to the UPS.
Installation Place	When clicking the "*Find it"* button, either the alarm will beep or the indicators will flash to inform users of the location. This helps users to identify a specific UPS in a multiple UPS installation.

[UPS->Configuration] Configure the parameters of the UPS.

Item	Definition
Supplied Power	
Voltage	Set the output voltage which is supplied to the connected equipment.
Utility Power Failure Condition	
High/Low Input (or Output) Voltage Threshold	When the utility power voltage or output voltage (according to the UPS support) is higher/lower than the threshold, the UPS will supply battery power to the connected equipment. This setting only comes into effect after a restart of the UPS.
Frequency Tolerance	Sets the acceptable range of the input frequency. It will be in power failure condition if out of this tolerance.
Operation	
Normal	Normal working mode of the UPS.
Generator Mode	If the UPS uses generator as its input power, this option should enable the UPS to function normally. If this option is selected, the UPS will be forbidden to enter Bypass mode or ECO mode to protect the powered equipment.
ECO Mode	On-line UPS enters Economy mode. The UPS will enter Bypass mode when the input voltage/frequency is in the range of thresholds. Once the utility voltage/frequency exceeds thresholds, the UPS will supply power to its load.
Manual Bypass	Determine whether to allow the UPS to enter Manual Bypass mode. If this option is selected, the UPS will be forced to enter Bypass mode.
Bypass	
Qualify Bypass	No Bypass: If this option is selected, the UPS will not enter Bypass mode and will stop supplying output power. Check Volt/Freq: If the utility voltage is in range of the voltage thresholds and the utility frequency is in range of the frequency tolerance, the UPS will enter Bypass mode.

	Otherwise the UPS will stop supplying output power. Check Volt Only: Only if the utility voltage is in the range of the voltage thresholds, the UPS will enter Bypass mode. Otherwise the UPS will stop supplying output power.
High/Low Bypass Voltage	When the UPS fault or overload occurs, the UPS will determine whether to enter Bypass mode according to the range of thresholds of utility voltage. If the utility voltage exceeds thresholds, the UPS will be forbidden to enter Bypass mode and stop supplying output power.
Power Restore	After utility power is restored, the UPS turns on automatically and supplies power to the computer. If the computer BIOS is set to boot when power restores, the computer will restart automatically. The following settings are used to configure the UPS restore actions:
Recharged Delay	When utility power is restored, the UPS will start to recharge after the specified delay is expired.
Recharged Capacity	When utility power is restored, the UPS will start to recharge after the specified battery capacity is met.
Returned Delay	When utility power is restored, the UPS will delay the restoration of output power. This option can be used to stagger the startup time of multiple UPSs to avoid overloading the utility power circuit or power source. The Returned Delay will take effect every time when the UPS restores power. This also includes the scheduling and user controlling task.
Battery	
Low Battery Threshold	When the UPS supplies battery power and the remaining capacity is lower than this threshold, the UPS will alarm.
External Battery Pack	Set the amount of external battery packs. This allows for an accurate runtime estimation based upon the total number of batteries.
System	
Cold Start	Set the ability of the UPS to start in the absence of input power. When this option is

	enabled, the UPS can be turned on without input power.
Audible Alarm	If this option is enabled, the UPS will issue an audible alarm when supplying battery power or output overload.
Dry Relay Function	This configures the power condition for the UPS dry relay to function when the selected condition occurs. Refer to UPS manual for further information about advanced UPS dry relay utilization. The Dry Relay Function provides following power conditions: Utility Failure: The utility power fails and the UPS is using battery power. Low Battery: The battery capacity is too low to support the connected computers to shutdown. Alarm: The UPS is issuing the audible alarm due to the occurrence of warning events, such as overload. Bypass: The UPS has switched to Bypass mode due to overload or UPS fault. UPS Fault: The UPS could be malfunctioned due to hardware fault, such as inverter fault, bus fault or overheated.
Screen Saver Time	When no UPS button is pressed or no power event occurs during this delay, the LCD screen will be turned off.
Wiring Fault Detect	If this option is enabled, the UPS will detect if the UPS wiring is not grounded or is reversed. It is recommended to assure the UPS wiring has ground connection first. This option should be enabled if the UPS wiring has ground connection.
Non-Critical Outlet Bank	
Turn Off Threshold	When supplying battery power, the UPS will power off the NCL outlet if the remaining battery capacity is lower than this threshold.
Turn off Delay Time	When supplying battery power, the UPS will power off this NCL outlet after this delay time is met.
Turn On Delay Time	When utility power is restored, the UPS will restore the output of the NCL outlet after the delay time is met. This prevents excessive power consumption caused by all the connected equipment rebooting at the same time.

[UPS->Master Switch] Switch the output power of the UPS to be on or off.

Item	Definition
Reboot UPS	Turn the UPS off and back on
Turn UPS Off	Turn the UPS off.
UPS Sleep	This command is available under Utility Power Failure Mode. It will make UPS under sleep mode until power is restored.
Cancel Switch	Cancel a pending action to turn the UPS off.
Turn UPS On	Turn the UPS on.
Shutdown/Sleep Delay	How long the UPS waits before it turns off in response to a "Reboot UPS", "Turn UPS off" or "UPS Sleep" command.
Reboot Duration	After the UPS is turned off, Reboot Duration defines how long the UPS waits before it turns on in response to "Reboot UPS" command.
Signal Clients to Shutdown	Select this option to notify PowerPanel Business Edition Clients before UPS turning off. The Shutdown Delay for the UPS can be modified to ensure a graceful shutdown.

[UPS->Bank Control] Display the current status of each Bank. Also, it provides on/off control for the Non-Critical Outlet Bank. Outlet Index and Device Name display the device that is powered by the specific bank.

Item	Definition
Non-Critical	Turn the non-critical bank on/off immediately.
Outlet Index	The index of outlet.
Device Name	Device Name on this outlet.

[UPS->Diagnostics] When a power failure occurs, the UPS will supply battery power to all connected equipment immediately. The UPS must have sufficient runtime for all connected computers to be shut down properly.

The **UPS**/**Diagnostics** page provides the information to verify if the UPS has sufficient battery runtime for the connected computers to shutdown properly. Perform a complete runtime calibration to ensure an accurate estimate of the runtime for the connected load.

Battery Test

The **Battery Test** will force the UPS to switch to battery power for 10 seconds. This allows the

user to verify the battery conditions and provides information about the battery, including the results and date of the last battery test. Click the **Initiate** button to begin a battery test.

Performing a battery test is prohibited when the **Frequency Working Mode** option is set to *fixed*. If performing a battery test on the fixed frequency mode, a UPS fault may occur and cause the UPS to enter Bypass mode. The frequency on Bypass mode may not be accepted and may damage the connected equipment.

The results will be reported after a battery test completes.

• **Last Test Date**: The date the last battery test was performed.
• **Last Test Result**: The results of the last battery test.
Passed: The battery performs normally during the test.
None: The UPS has never performed the battery test.
Failed: The battery test results in failure.
Follow the steps below if the battery test fails:
Repeat the battery test and replace the batteries if the test fails again.
Contact **CyberPower** for assistance if the battery test fails after the batteries have been replaced.

Runtime Calibration
The **Runtime Calibration** ensures the runtime estimate is accurate with the load and the current battery capacity. The results show the runtime, the results, and the date of the last calibration. When a runtime calibration is initiated, the connected equipment will be run on battery power until the batteries are completely discharged. Following the Runtime Calibration, the UPS will automatically begin recharging the batteries.

Users can click the **Start** button to initiate a runtime calibration. Click the **Cancel** button to stop the runtime calibration. The result will be reported after a calibration is finished or canceled.

• **Estimated Runtime**: The estimated runtime of the batteries.
• **Last Calibration Elapsed Time**: The elapsed time of last Runtime calibration.
• **Last Calibration Result**: The results of the last runtime calibration.
Passed: The runtime calibration is completed and the batteries are good.
None: The UPS has never performed a runtime calibration.
Failed: The UPS fails during the runtime calibration.
Canceled: The calibration was interrupted.
• **Last Calibration Date**: The last date performing the runtime calibration.

Note: 1. *It is recommended to perform at least one calibration every 3 months.*
2. *A complete calibration causes the battery capacity to deplete. Ensure the UPS has recharged completely after performing a calibration.*

[UPS->Schedule]: Sets the UPS to automatically shutdown and restart at scheduled times (one time/per day/per week). The **Schedule** page manages scheduled shutdowns and lists all configured schedules. Each schedule row displays the details of when the schedule will take effect and when to perform it.

[One Time]: The user may set a specific date and time for the UPS shutdown.
[Per Day]: Set a specific time of the day for the UPS shutdown.
[Per Week]: Set a specific day and time of the week for the UPS shutdown.

1. Click [One Time], [Per Day] or [Per Week] option and Click “Next>>”, Enter the date and time to shut down the UPS. Select [Never], [Immediately], or the date and time for the UPS to restore power. Select the bank to be controlled, and click “Shutdown Clients” to set all clients to perform a graceful shutdown. You can enter a comment for this Schedule.
2. Click [Apply] to add the item to the Schedule. Click [Reset] to remove the item from the Schedule.
3. Applied settings are listed in [Schedule] menu.

Note: The management system allows up to 10 scheduled settings.

[UPS->Wake on Lan] This function is used to wake the PC through the network. (Make sure the PC hardware has such function supported and configures as "Enable" under BIOS). Enter the IP address of that PC when it is on and the system will search its MAC accordingly. The maximum number of IP that can be set is 50.

[UPS->PowerPanel Clients] Display the Information of connected PPBE (PowerPanel Business Edition) Clients. The connection is executed by PPBE Clients and the listed clients will be removed if disconnected for 1 hour.

[Envir] Following items can be displayed/configured through the Envir page (RMCARD 203/303 only).

[Envir->Status] Display the basic information of the environment sensor and connected devices.

Item	Definition
Information	
Name	The name of the environment sensor.
Location	The location of the environment sensor.
Temperature	
Current Value	The current temperature of the environment.
Maximum	The highest temperature as well as the time of occurrence detected by the environment sensor.
Minimum	The lowest temperature as well as the time of occurrence detected by the environment sensor.
Humidity	
Current Value	The current humidity of the environment.

Maximum	The highest humidity as well as the time of occurrence detected by the environment sensor.
Minimum	The lowest humidity as well as the time of occurrence detected by the environment sensor.
Contact	Display the name and status (Normal/Abnormal) of contacts.

[Envir->Configuration]

Item	Definition
Information	
Name	The name used to identify the environment sensor.
Location	The place where the environment sensor is located.
Temperature	
High Threshold	Upper limit for normal temperature.
Low Threshold	Lower limit for normal temperature.
Hysteresis	The difference between High/Low Threshold and the point where the temperature state is from abnormal to normal.
Rate of Change	The rate used to define abnormal change of temperature.
Unit	The unit of temperature.
Humidity	
High Threshold	Upper limit for normal humidity.
Low Threshold	Lower limit for normal temperature.
Hysteresis	The difference between High/Low Threshold and the point where the humidity state is from abnormal to normal.
Rate of Change	The rate used to define abnormal change of humidity.
Contact	
Name	The name used to identify the contact.
State	The state used to define normal condition of the contact.

[Logs->Event Logs] Display the list of events and a brief description of each event along with the date and time stamp.

Note: 1. The recordable events are listed under "System->Notifications->Event Action."
2. The recorded time is using the 24-hour clock format.

[Logs->Status Records] This page is used to view the logs of the UPS status and environment status; however, different product may have different items displayed.

All items have the same definition as they are in the UPS status or environment status.

- Input min (V): The minimum input voltage of the utility power from the previous record.
- Input max (V): The maximum input voltage of the utility power from the previous record.
- Input (Hz): The current frequency of the utility power supplied to the UPS.
- Output (V): The output voltage of the UPS supplying to the connected equipment.
- Output (Hz): The output frequency of the UPS supplying to the connected equipment.
- Load (%): The percentage of the total UPS power load supplying to the connected equipment.
- Capacity (%): The percentage of the current UPS battery capacity.
- Remaining Runtime: How long the UPS can support its load under battery mode.
- Temperature: The current temperature of the environment.
- Humidity: The current humidity of the environment.

[Logs->Graphing] This page is used to diagram the data of the Status Record. The graphing function makes the status records easier to be analysed.

Item	Definition
Graph Period	The period used to draw the graph backward from today. The longer period selected, the more graphing time is needed.
Graph Data	The data used to draw the graph. The more data selected, the more graphing time is needed.
Graph Node	Select Display All Nodes in Detail will display all the points along with the line; meanwhile, moving the cursor on the point will show the information of that point. If the box is not selected, the graph will show the line only but less graphing time is needed.
Launch Graph in New Window	Click the box will open a new page showing the graph in detail.

[Logs->Maintenance] This page is used to maintain "Event Logs" and "Status Records". The application provides information on how many events have been recorded before it is full.

Item	Definition

Event Logs	
Clear All	Clear the existing event logs.
The Number of Events	The number of existing event logs/the max number of event logs.
Save Event Logs	Save the existing event logs as a txt file.
Status Records	
Recording Interval	Set the frequency to record the status data. A smaller interval will provide more frequent recordings but maintain them for a shorter period. A larger interval will provide less frequent recordings, but maintain them for a longer period.
Clear All	Clear the existing status records.
Remaining Time	The remaining recordable time base on the recording interval.
Save Status Records	Save the status records as a txt file.

Note: Some old event logs/status records will be cleared automatically when there is no space to record.

[System->General->User Account] This page is used to configure the login account.

Information	Description
Administrator	The administrator can access full function, including enable/disable the Viewer account.
Viewer	The viewer can access the read function but can not control or change any settings.
Manager IP	This IP setting is to set the allowable IP addresses. Users who log in as Admin (Viewer) can access RMCARD web pages if its IP Address is in one of Admin (Viewer) Manager IPs. If you want to access RMCARD from any IP address, you can set one of them as 0.0.0.0 or 255.255.255.255.

Change Administrator account:

- Enter User Name
- Enter Current Password for Authentication
- Set the Manager IP (optional)
- Enter New Password
- Enter Confirm Password
- Click “Apply”

Change Viewer account:

- Select “Allow Access” to enable the Viewer account
- Enter the User Name
- Set the Manager IP (optional)
- Enter New Password
- Enter Confirm Password
- Click “Apply”

[System->General->Date & Time]Current Settings: Displays the current date and time on the card and allows users to set the date and time. To set the date and time, users can choose to set manually or by using the NTP (Network Time Protocol) server.

System Time Configuration:
Choose the Time Zone off your location first, and

- **Using NTP server**: Enter the IP address/domain name of NTP servers, choose the time zone, and set the frequency to update the date and time from NTP server. Choose "Update right now" to update immediately.
- **Manual Setup**: Enter the date and time in the designated format.

[System->General->Identification] Assign the system’s name, contact, and location.

Item	Definition
Name	The name of the equipment.
Contact	Where the power equipment is located.
Location	The person to contact about this equipment.

[System->General->Security] Set for security setting.

Item	Definition
Timeout	The period (in minutes) that the system waits before auto logging off
Secret Phrase	The Authentication Phrase used to communicate with PowerPanel Business Edition Client

[System->Network Service->TCP/IPv4] Display the current TCP/IP settings: IP address, Subnet Mask, Gateway, and DNS server. This also provides the function to obtain TCP/IP settings from the DHCP server.

- DHCP: Select the “Enable DHCP” option and click Apply to get IP address, Subnet Mask, and Gateway by DHCP. Select the “Obtain DNS Address from DHCP” option and click Apply to get the IP of DNS from the DHCP.
- Manual : Enter the TCP/IP settings directly and click Apply.

[System->Network Service->TCP/IPv6] Display the current the IPv6 settings.

- IPv6 Interface: Displays the current IPv6 address.
- IPv6 Gateway: Displays the current IPv6 gateway.
- IPv6 Configuration:
  - Allow Access: Set the IPv6 service to either Enable or Disable.
  - Router Control: The IPv6 address is assigned through the method (Stateless Address Autoconfiguration, Stateless DHCPv6 or Stateful DHCPv6) which is decided by router setting.
  - Manual: The IPv6 address is assigned by manuel setting.
- Manual IPv6 Address : Enter the IPv6 address directly and click Apply when the Manuel box is checked.

[System->Network Service->SNMPv1 Service] Allow users to select the NMS, defined by the IP settings that can use the channel to control the system data access through SNMPv1 Service.

Item	Definition
Allow Access	Set the SNMP service to either Enable or Disable.
Community Name	The name used to access this community by a Network Management System (NMS). The field must be 1 to 15 characters length.
IP	The IP address or IP address mask can be accessed by NMS. A specific IP address allows access only by the NMS with the specified IP Address. The 255 is regarded as the mask and the rules list as follows: • 192.168.20.255: Access only by an NMS on the 192.168.20 segment. • 192.255.255.255: Access only by an NMS on the 192 segment. • 0.0.0.0 (the default setting) or 255.255.255.255: Access by any NMS on any segment.
Access Type	The allowable action for the NMS through the community and IP.
Read Only	Gets at anytime but cannot SETS.
Write/Read	Gets at anytime, SETs anytime unless someone is logged in the Web interface.
Forbidden	No GETS or SETS.

[System->Network Service->SNMPv3 Service] Allow users to enable/disable SNMPv3 service and configure the parameters of accessing through SNMPv3 service (HW V2.0 above only).

Item	Definition
Allow Access	Set the SNMPv3 service to either Enable or Disable.

User Name	The name to identify SNMPv3 user. The field must be 1 to 31 characters length.
Authentucation Password	The password used to generate the key used for authentication. The field must be 16 to 31 characters length.
Privacy Password	The password used to generate the key used for encryption. The field must be 16 to 31 characters length.
IP	The IP address or IP address mask can be accessed by NMS. A specific IP address allows access only by the NMS with the specified IP Address. The 255 is regarded as the mask and the rules list as follows: • 192.168.20.255: Access only by an NMS on the 192.168.20 segment. • 192.255.255.255: Access only by an NMS on the 192 segment. • 0.0.0.0 (the default setting) or 255.255.255.255: Access by any NMS on any segment.
Authentucation Type	The hash type for authentication.
Privacy Type	The type for encrypting and decrypting data.

[System->Network Service->Web Service] Select Enable to allow access to the HTTP or HTTPS(HW V2.0 above only) Service and configures the TCP/IP port for them. Use the “Valid Certificate” to browse the detailed information of HTTPS Certification；use the “upload Certificate” to upload and replace the HTTPS Certification.

Note: The format of uploading certificate must in a standard PEM(Privacy Enhanced Mail).

[System->Network Service->Telnet Service] Selects Enable to allow access to the Telnet Service and configures the TCP/IP port that Telnet uses to communicate (23 by default).

Note: To enhance security, users can change port setting to any unused port from 5000 to 65535. Users must then specify the non-default port to obtain access. Telnet clients require users to append either a space and the port number or a colon and the port number to the command line to access the control console.

[System->Network Service->FTP Service] Allows users to Enable/Disable the FTP server service and configure the TCP/IP port of the FTP server (21 by default).

Note: The FTP server is used for upgrading Firmware. For more details about the upgrade process, please refer to “Firmware Upgrade” section.

[System->Notifications->Event Action] Display the event actions for each event. Users can click on the event to modify its action. When a specific event happens, the user can be notified by the corresponding method according to this list.

- Log: Record the event in the “Event Logs”.
- E-mail: Send an email to a specific user (An available SMTP server is necessary).
- Trap: A SNMP trap sent to a specific IP address.
- SMS: Send a short message to a specific mobile phone number (An available SMS service provider is needed).

[System->Notifications->SMTP Server] After setting the proper SMTP server, the UPS can send an email to users when a specific event occurs.

Item	Definition
Server's IP/Host Name	The IP or Host Name of SMTP server used to notify users by E-mail.
Sender's E-mail Address	The context of From field shown in the e-mail message sent to user.
Authentication	Select this option if the SMTP server needs Authentication check.
Username	Username used for Authentication.
Password	Password used for Authentication.

[System->Notifications->E-mail Recipients] Sets up to five e-mail recipients in designated email address format. The Recipients will receive an e-mail notification when Events occur.

To add a new recipient, click *New Recipient*. To modify or delete an existing Recipient, click the e-mail address of that recipient. To check if SMTP setting and the email recipients are set correctly, click *TEST* button to check receiving status.

[System->Notifications->Trap Receivers] List of NMS IP as TRAP receiver, and the number of receivers can be set up to 10. The receiver will receive a SNMP trap when an event occurs.

To add a new receiver, click *New Receiver*. To modify or delete an existing receiver, click the IP address or name of that receiver. To check if the traps can be received correctly, click *TEST* button.

[System->Notifications->SMS Service] Short Message Service (SMS) is a communication service used by mobile communication systems. Using standardized communication protocols will allow the interchange of short text messages between mobile devices. The system provides 4 methods to users to choose how they want to send the messages.

Information	Description
Service provider is Clickatell	Select the **Clickatell** option in the SMS Method field. Complete all the account details including Username, Password and HTTP API ID fields.

Service provider accepts HTTP GET	This specification from the SMS provider is required before using the **HTTP GET** method. Select the Using **HTTP GET** option in the SMS Method field. Insert the E_PHONE_NUMBER as recipient's mobile phone number and the E_PHONE_MESSAGE as event message, describe in the specification, and fill in the URL field. The expressions will be replaced by relevant content before the Client sends a notification to SMS provider.
Service provider accepts HTTP POST	This specification from the SMS provider is required before using the **HTTP POST** method to deliver messages to SMS providers. Select the Using **HTTP POST** option in the SMS Method field. Insert E_PHONE_NUMBER as recipient's mobile phone number and E_PHONE_MESSAGE as the event message, describe in the specification, and fill in the POST URL and POST BODY fields. The expressions will be replaced by the relevant content before the Agent/Client sends a notification to the SMS provider.
Service provider accepts E-mail(SMTP)	This specification from a SMS provider is required before using the E-mail to deliver the messages to SMS providers. Select the Using E-mail option in the Service Provider field. Insert E_PHONE_NUMBER as recipient's mobile phone number and the E_PHONE_MESSAGE as event message, describe in the specification. Fill in the Recipient's Address, Subject and Content. The expressions will be replaced by the relevant content before the Agent/Client sends a notification to the SMS provider.

[System->Notifications->SMS Recipients] Users can set up to 10 mobile phone numbers as SMS recipients. The Recipients will receive a short message notification when events occur.

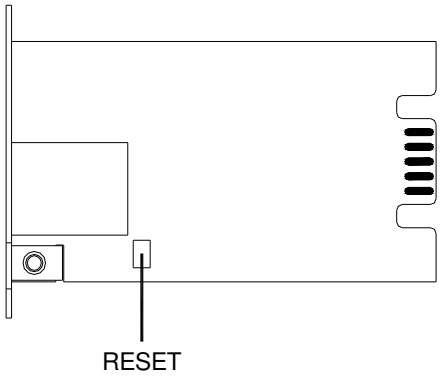
To add a new recipient, click *New Recipient*. To modify or delete an existing Recipient, click the mobile number or Name of that recipient. To test SMS settings, click *TEST* button and see if the test message is correctly received.

[System->About] Display vital information for the Remote Management Card.

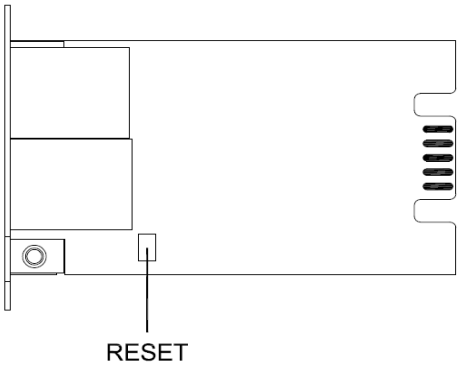
Item	Definition
Model Name	Model name of the Remote Management Card.
Firmware Version	The version number of the current firmware installed on Remote Management Card.
Firmware Updated Date	The date the firmware was last updated.
Hardware Version	The hardware version of the Remote Management Card.
MAC Address	MAC address of the Remote Management Card. Note: the MAC address is also listed on the top of the Remote Management Card.
Save Configuration	Click Save to save the configuration to local PC. The text file will have a default format of YYYY_MM_DD_HHMM.txt.
Restore Configuration	Use this function to restore a configuration that has been saved earlier. Click Browse to the location of the saved configuration file and click Submit.

Reset to Default Setting / Recover from a Lost Password

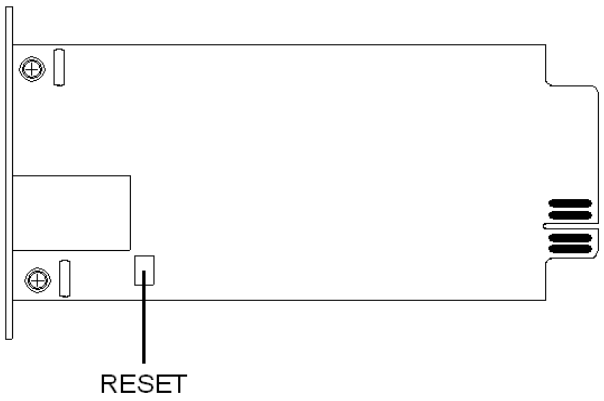
To reset the CyberPower Remote Management Card to its default setting (including WEB log-in user name and password), please use the following steps



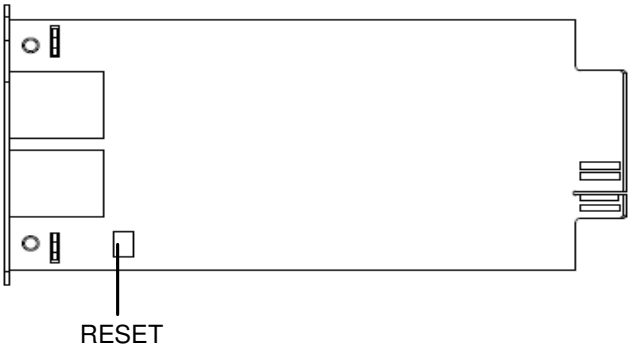
RMCARD202



RMCARD203



RMCARD302



RMCARD303

1. Remove the two retaining screws on the card without turning off the UPS.
2. Uninstall the card.
3. Take off the jumper on the Reset pins as illustrated (the jumper is still necessary after reset, please do not lose or dispose it).
4. Re-install the card into the expansion port.
5. Wait until the Green LED is flashing (the frequency of the ON/OFF flashing is one second).
6. Uninstall the card again.
7. Place the jumper back onto the Reset pins.
8. Install card into the expansion port again.
9. Tighten the retaining screws.

Firmware Upgrade

By upgrading the Firmware, you can obtain both the new features and updates/improvements to existing functionality. There are two files to update in order to upgrade the firmware version.

RMCARD202/RMCARD203 upgrade files:
(HW V2.0)
- A. cpsrm2sbfw_XXX.bin
- B. cpsrm2sbdata_XXX.bin

(HW V1.0)
- A. cpssnmpfw_XXX.bin
- B. cpssnmpdata_XXX.bin

RMCARD302/RMCARD303 upgrade files:
(HW V2.0)
- A. cpsrm3sbfw_XXX.bin
- B. cpsrm3sbdata_XXX.bin

(HW V1.0)
- A. cpsrm302afw_XXX.bin
- B. cpsrm302adata_XXX.bin

Use the following steps to upgrade the firmware.

1. Download the latest Firmware
2. Extract the file to “C:\”
3. Open a command prompt window
4. Login to the CyberPower Remote Management Card with FTP command, type
   - ftp
   - ftp> open
   - To [current ip of RMCARD] [port]; EX: To 192.168.22.126 21
   - Input USER NAME and PASSWORD (same as the administrator account in Web interface default : cyber ; cyber)
5. Upgrade the file A, type
   ftp > bin
   ftp > put A
   (RMCARD202 for ex., put cpssnmpfw_XXX.bin)
6. Upgrade complete, type
   ftp > quit
7. The system will reboot after you type “quit”
8. Login to the FTP again as step 4.
9. Upgrade the file B, type
   ftp > bin
   ftp > put B
   (RMCARD202 for ex., put cpssnmpdata_XXX.bin)
10. Upgrade complete, type
    ftp > quit
11. The system will reboot after you type “quit”

You can check to see if the firmware upgrade was successful by checking the ”Firmware version” on the [System->About] webpage.

Note: Please do not turn the UPS off when processing the Firmware upgrade.

Trouble Shooting

Problem	Solution
Unable to configure the Management Card by method 1 or method 2 in user's manual.	1. Check the LED status, the normal condition is when yellow and green LED are both on. If green LED is off: => Check the Management Card for proper seating in the UPS and the UPS power is on. If yellow LED is off: => Ensure the network connection is valid 2. Ensure the PC being used is on the same physical network as Remote Management Card. 3. Ensure the Jumper on the Reset Pin is correctly installed.
Unable to ping the Management Card.	1. Use method 1 and method 2 in user's manual to get/set a correct IP address for the Remote Management Card. 2. If the PC being used is on a different physical network from the Remote Management Card, verify the setting of subnet mask and the IP address of gateway.
Lost user name and password.	Please refer to the "Reset to Default Setting / Recover from a Lost Password" section of the user's manual.
Default Network Setting?	IP: 192.168.20.177 Subnet mask : 255.255.255.0 DHCP: On
Unable to access the Web Interface.	1. Ensure the Http/Https access is enabled. 2. Ensure you can ping the RMCARD. 3. Ensure you are specifying the correct URL.
Unable to operate a SNMP get/set.	SNMPv1: Verify the community name. SNMPv3: Verify the user profile configuration.
Unable to receive traps.	1. Ensure the trap types (SNMPv1/SNMPv3) and trap receiver are configured correctly. 2. Ensure the IP address of gateway is configured correctly if the RMCARD and NMS is on a different physical network.

Appendix 1. IP Address Settings for CyberPower Remote Management Card

Overview

All devices on a computer network need to have an IP address. Each device's IP address is unique. The same address cannot be used twice. In order to assign an IP address to the CyberPower Remote Management Card, you must determine the range of the available IP addresses, and then choose an unused IP address to assign to the Remote Management Card. **PLEASE NOTE:** You may need to contact your network administrator to obtain an available IP address.

Procedures to find an IP address:

1. **Locate the subnet of CyberPower Remote Management Card.**
   One way to determine the range of possible IP addresses is to view the network configuration on a workstation. Click on [Start] and select [Run]. Type "command" into the open box and click [OK]. At the command prompt type "**ipconfig /all**" and press [Enter]. The computer will display network information as listed below:

   Ethernet adapter
   Connection-specific DNS Suffix……: xxxx.com
   Description……: D-Link DE220 ISA PnP LAN adapter
   Physical Address……: 00-80-C8-DA-7A-C0
   DHCP Enabled……...: Yes
   Autoconfiguration Enabled ...: Yes
   IP Address……..: 192.168.20.102
   Subnet Mask……..: 255.255.255.0
   Default Gateway……..……...: 192.168.20.1
   DHCP Server……..……: 192.168.20.1
   DNS Servers……: 211.20.71.202
   168.95.1.1

2. **Select an IP Address for CyberPower Remote Management Card**
   Verify the IP Addresses for the computer and the Remote Management Card belong to the same subnet. Refer to the above network information, the possible IP Address for the Remote Management Card could be 192.168.20.* (* hereafter represents any number between 1 and 255). Similarly, if the Subnet Mask is 255.255.0.0, the IP Address for Remote Management Card could be set up as 192.168.*.* to reach the same subnet with the computer.

   To verify there is no other equipment connected to the network using the same IP Address, run "Ping 192.168.20.240" at the DOS Mode prompt when the IP Address you would like to set is 192.168.20.240. If the response is presented as below, the IP address is most likely not used and may be available for the CyberPower Remote Management Card.

   Pinging 192.168.20.240 with 32 bytes of data:

   Request timed out.
   Request timed out.
   Request timed out.
   Request timed out.

If the response is shown as below, the IP address is in use. Try another IP address until an available address is found.

```
Pinging 192.168.20.240 with 32 bytes of data:
Reply from 192.168.20.240: bytes=32 time<10ms TTL=64
Reply from 192.168.20.240: bytes=32 time<10ms TTL=64
Reply from 192.168.20.240: bytes=32 time<10ms TTL=64
Reply from 192.168.20.240: bytes=32 time<10ms TTL=64
```

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